

2. Amendments to the Drawings

Three (3) sheets of drawings are attached including changes to changes suggested by the Examiner. These sheets include Figs. 1-5 and are intended to replace previously filed drawing sheets.

Attachment: Replacement Sheets (3)

3. REMARKS / DISCUSSION OF ISSUES

Claims 1-19 are pending in the application. Claims 1, 8, 11 and 14 are in independent form.

Unless indicated otherwise, claims are amended for non-statutory reasons: to correct one or more informalities, remove figure label number(s), and/or to replace European-style claim phraseology with American-style claim language.

I. Objection to the Drawings

The Examiner objects to the drawings. The replacement sheets filed herewith address the objections and render the objections moot.

Approval of the drawings and withdrawal of all objections to the drawings is earnestly solicited.

II. Rejection under 35 U.S.C. § 102(e)

1. Claims 1, 4, 8 and 10-14 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Persson*. (U.S. Patent 6, 624, 286).

For at least the reasons set forth above, it is respectfully submitted that these rejections are improper and should be withdrawn.

A proper rejection under 35 U.S.C. § 102(e) requires that all of the claimed elements be found in the applied art. If a single claimed element is not found in the applied art, a prima facie case of anticipation cannot be properly established.

Claim 1, is drawn to a transmitter and features, inter alia, "...*phase adjusting means for adjusting an overall phase of a transmitter chain including said quadrature modulator, said variable gain amplifier, said up-converter, and said variable gain power amplifier, **said overall phase being adjusted on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.***"

Claims 8, 11 and 14, drawn to a phase adjuster, a method and a communication device, respectively, include similar features.

In an embodiment, a transmitter 1 comprises a base band unit 20 comprising a processor and storage unit 21, digital-to-analog converters 23 and a memory 24 comprising a look-up table (LUT). Base band unit 20 provides control signals C1, C2 and C3 to at least control the gain of variable gain amplifier 9 and variable gain power amplifier 17. In an embodiment, transmitter 1 comprises an RF signal level detector 25 that produces a DC output signal indicative of the amplitude of the transmitted RF signal, a temperature sensor 26, and a battery voltage sensor 27. From information comprised in look-up table 24, processor unit 21 calculates the required phase change and controls a quadrature phase rotator 28 such that the IQ-constellation is rotated. (See paragraph [00019] – [00021] of the filed application.)

By contrast, the reference to *Persson* discloses a variable gain amplifier 170 and a power amplifier 190 that provides a nominal gain, G, which is not variable. The Examiner asserts that the amplifier 190 is a variable gain power amplifier. However, the reference discloses that the amplifier 190 is a power amplifier and neither teaches nor suggests that the amplifier 190 is variable. Therefore, it follows that the reference to *Persson* cannot possibly adjust the overall phase of the transmitter on the basis of pre-stored information due to simultaneous gain changes of a variable gain amplifier and a variable gain power amplifier because *Persson* **does not disclose a variable gain power amplifier**. (See column 8, line 24-column 9, line 25 of the reference to *Persson* for support for the above assertions).

The reference to *Persson* does disclose a distortion detection block 250. The distortion detection block 250 accumulates error signals during the amplification of a distortion detection signal and calculates a relationship between the measured distortion characteristics and input power. This relationship is used to update the predistortion coefficients in the predistortion block 110, enabling the block 110 to compensate for non-linearities (non-constant phase shift) in the power amplifier 190. Thus, the reference notes that non-linearities of a power amplifier may be compensated by predistortion. However, the reference to *Persson* lacks the

disclosure of **adjusting the overall phase of the transmitter** on the basis of pre-stored information **due to simultaneous gain changes** of a variable gain amplifier and a variable gain power amplifier. To wit, the reference to *Persson* discloses compensating for non-constant phase shift across a power amplifier, but does not disclose adjusting the overall phase of the transmitter; and does not disclose making any adjustment based on gain changes as featured in claims 1, 8, 11 and 14. Moreover, in keeping with the traversal above, the reference to *Persson* **cannot disclose** this adjustment due to simultaneous gain changes of a variable gain amplifier and a variable gain power amplifier.

For at least the reasons set forth above, it is respectfully submitted that the reference to *Persson* lacks at least one of the features of claims 1, 8, 11 and 14. As a result, a proper *prima facie* case of anticipation based on *Persson* has not been made and the rejection of claims 1, 8, 11 and 14 is improper and should be withdrawn. Therefore, claims 1, 8 and 14 and the claims that depend therefrom are patentable over the applied art. Allowance is earnestly solicited.

III. Rejection under 35 U.S.C. § 103(a)

Claims 2-3, 5-6, 7 and 9 were rejected under 35 U.S.C. § 103(a) as being obvious in view of *Persson* in view of other secondary references. For at least the reasons set forth above, it is respectfully submitted that the claims from which the present claims depend are patentable over the applied art. Therefore, and while in no way conceding to the propriety of the present rejection under 35 U.S.C. § 103(a), Applicants respectfully submit that claims 2-3, 5-6, 7 and 9 are patentable over the applied art. Allowance is earnestly solicited.

IV. New Claims


New claims 15-20 depend from claim 14, directly or indirectly. These claims add no new matter. Moreover, because fewer than twenty (20) claims were filed originally, it is respectfully submitted that no additional fee for these claims is required.

V. Conclusion

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees, including, but not limited to, the fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted,



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